This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for storing input groups of uncoded binary data on a storage medium, comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" always occur within a second number of bits; and

storing the encoded data stream on the storage medium.

2. (Previously Presented) A method for storing input groups of uncoded binary data on a storage medium, comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits, wherein the first number is greater than the second number; and

storing the encoded data stream on the storage medium.

3. (Original) The method of claim 1, wherein the predetermined bit pattern represents a maximum amplitude peak in a constrained waveform that is guaranteed to occur within the first number of bits.

4. (Original) The method of claim 1, wherein the encoded data blocks are generated using an encoder table.

5. (Previously Presented) The method of claim 1, further comprising:

decoding the encoded data block by determining the decoded data block corresponding to the encoded data block.

6. (Original) The method of claim 1, wherein the encoding function is performed by a finite state code.

7. (Original) The method of claim 6, wherein one encoded data block corresponds to multiple uncoded data blocks, and wherein a value of at least one adjacent block is used to determine the uncoded data block that corresponds to the encoded data block corresponding to multiple uncoded data blocks.

8. (Original) The method of claim 1, wherein the predetermined bit pattern comprises "010", each uncoded data block comprises eight bits, and each encoded data block comprises nine bits.

9. (Original) The method of claim 8, wherein the first number comprises twelve and the second number comprises six.

10. (Original) The method of claim 1, wherein the predetermined bit pattern comprises "010", wherein each uncoded data block comprises sixteen bits and wherein each encoded data block comprises seventeen bits.

11. (Original) The method of claim 10, wherein the first number comprises twenty bits and the second number comprises fourteen bits.

12. (Original) The method of claim 10, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme.

13. (Original) The method of claim 1, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

14. (Original) The method of claim 13, wherein the first number is fourteen.

15. (Original) The method of claim 1, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises sixteen bits, and wherein each encoded data block comprises seventeen bits.

16. (Original) The method of claim 15, wherein the first number is twenty-one.

17. (Original) The method of claim 15, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme.

18. (Original) The method of claim 1, wherein the predetermined bit pattern comprises either "0100" or "0010", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

19. (Original) The method of claim 18, wherein the first number is twelve.

20. (Original) The method of claim 1, wherein the predetermined bit pattern comprises either "0100" or "0010", wherein each uncoded data block comprises sixteen bits.

21. (Original) The method of claim 20, wherein each encoded data block comprises seventeen bits and wherein the first number comprises nineteen bits.

22. (Original) The method of claim 20, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme and wherein the first number is fifteen.

23. (Currently Amended) A method for storing input groups of uncoded binary data on a storage medium, comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits; and

storing the encoded data stream on the storage medium, wherein the encoded data block can be used in partial response and extended partial response systems.

24. (Original) The method of claim 1, wherein the predetermined bit pattern is included in one encoded data block or spans two encoded data blocks.

25. (Currently Amended) A system for storing input groups of uncoded binary data on a storage medium, comprising:

means for receiving a plurality of uncoded data blocks in a data stream;

means for generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" always occur within a second number of bits; and

means for storing the encoded data stream on the storage medium.

26. (Previously Presented) A system for storing input groups of uncoded binary data on a storage medium, comprising:

means for receiving a plurality of uncoded data blocks in a data stream;

means for generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs

within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits, wherein the first number is greater than the second number; and

means for storing the encoded data stream on the storage medium.

27. (Original) The system of claim 25, wherein the predetermined bit pattern represents a maximum amplitude peak in a constrained waveform that is guaranteed to occur within the first number of bits.

28. (Original) The system of claim 25, wherein the encoding function is performed by a finite state code.

29. (Original) The system of claim 28, wherein one encoded data block corresponds to multiple uncoded data blocks, and wherein a value of at least one adjacent block is used to determine the uncoded data block that corresponds to the encoded data block corresponding to multiple uncoded data blocks.

30. (Original) The system of claim 25, wherein the predetermined bit pattern comprises "010", each uncoded data block comprises eight bits, and each encoded data block comprises nine bits.

31. (Original) The system of claim 25, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

32. (Original) The system of claim 25, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises sixteen bits, wherein each encoded data block comprises seventeen bits.

33. (Original) The system of claim 25, wherein the predetermined bit pattern comprises either "0100" or "0010", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

34. (Original) The system of claim 25, wherein the predetermined bit pattern is included in one encoded data block or spans two encoded data blocks.

35. (Currently Amended) An article of manufacture including code for storing input groups of uncoded binary data on a storage medium, wherein the code is capable of causing operations comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" always occur within a second number of bits; and

storing the encoded data stream on the storage medium.

36. (Previously Presented) An article of manufacture including code for storing input groups of uncoded binary data on a storage medium, wherein the code is capable of causing operations comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits, wherein the first number is greater than the second number; and

storing the encoded data stream on the storage medium.

37. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern represents a maximum amplitude peak in a constrained waveform that is guaranteed to occur within the first number of bits.

38. (Original) The article of manufacture of claim 35, wherein the encoded data blocks are generated using an encoder table.

39. (Previously Presented) The article of manufacture of claim 35, further comprising:

decoding the encoded data block by determining the decoded data block corresponding to the encoded data block.

40. (Original) The article of manufacture of claim 35, wherein the encoding function is performed by a finite state code.

41. (Original) The article of manufacture of claim 40, wherein one encoded data block corresponds to multiple uncoded data blocks, and wherein a value of at least one adjacent block is used to determine the uncoded data block that corresponds to the encoded data block corresponding to multiple uncoded data blocks.

42. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises "010", each uncoded data block comprises eight bits, and each encoded data block comprises nine bits.

43. (Original) The article of manufacture of claim 42, wherein the first number comprises twelve and the second number comprises six.

44. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises "010", wherein each uncoded data block comprises sixteen bits and wherein each encoded data block comprises seventeen bits.

45. (Original) The article of manufacture of claim 44, wherein the first number comprises twenty bits and the second number comprises fourteen bits.

46. (Original) The article of manufacture of claim 44, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme.

47. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

48. (Original) The article of manufacture of claim 47, wherein the first number is fourteen.

49. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises "111", wherein each uncoded data block comprises sixteen bits, and wherein each encoded data block comprises seventeen bits.

50. (Original) The article of manufacture of claim 49, wherein the first number is twenty-one.

51. (Original) The article of manufacture of claim 49, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme.

52. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises either "0100" or "0010", wherein each uncoded data block comprises nine bits and wherein each encoded data block comprises ten bits.

53. (Original) The article of manufacture of claim 52, wherein the first number is twelve.

54. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern comprises either "0100" or "0010", wherein each uncoded data block comprises sixteen bits.

55. (Original) The article of manufacture of claim 54, wherein each encoded data block comprises seventeen bits and wherein the first number comprises nineteen bits.

56. (Original) The article of manufacture of claim 54, wherein a correspondence of uncoded to encoded data blocks comprises a finite state code scheme and wherein the first number is fifteen.

57. (Currently Amended) An article of manufacture including code for storing input groups of uncoded binary data on a storage medium, wherein the code is capable of causing operations comprising:

receiving a plurality of uncoded data blocks in a data stream;

generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits[[,]]; and

storing the encoded data stream on the storage medium, wherein the encoded data block can be used in partial response and extended partial response systems.

58. (Original) The article of manufacture of claim 35, wherein the predetermined bit pattern is included in one encoded data block or spans two encoded data blocks.

59. (Previously Presented) A system for storing input groups of uncoded binary data on a storage medium, comprising:

means for receiving a plurality of uncoded data blocks in a data stream;

means for generating one corresponding encoded data block for each uncoded data block, wherein an encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits; and

means for storing the encoded data stream on the storage medium, wherein the encoded data block can be used in partial response and extended partial response systems.